

2003
Virginia Department of Transportation
Daily Traffic Volume Estimates
Including Vehicle Classification Estimates
where available

Special Locality Report
112
Town of Front Royal

Prepared By
Virginia Department of Transportation
Mobility Management Division

In Cooperation With
U.S. Department of Transportation
Federal Highway Administration

Virginia Department of Transportation
Mobility Management Division
Traffic Monitoring Section

The Virginia Department of Transportation (VDOT) conducts a program where traffic count data are gathered from sensors in or along streets and highways and other sources. From these data, estimates of the average number of vehicles that traveled each segment of road are calculated. VDOT periodically publishes booklets listing these estimates.

One of these booklets, titled "Average Daily Traffic Volumes with Vehicle Classification Data, on Interstate, Arterial and Primary Routes" includes a list of each Interstate and Primary highway segment with the estimated Annual Average Daily Traffic (AADT) for that segment. AADT is the total annual traffic estimate divided by the number of days in the year. This booklet also includes information such as estimates of the percentage of the AADT made up by 6 different vehicle types, ranging from cars to double trailer trucks; estimated Annual Average Weekday Traffic (AAWDT), which is the number of vehicles estimated to have traveled the segment of highway during a 24 hour weekday averaged over the year; as well as Peak Hour and Peak Direction factors used by planners to formulate design criteria.

In addition to the Primary and Interstate publication, one hundred books are published periodically, one for each of 100 areas across the state defined by VDOT for record-keeping purposes. These books include traffic volume estimates for roads within the county, cities, and towns within the area. These books are titled "Daily Traffic Volumes Including Vehicle Classification Estimates, where available; Jurisdiction Report numbers 00 through 99".

Also available are a number of reports summarizing the average Vehicle Miles Traveled (VMT) in selected jurisdictions and other categories of highways. There are many different ways to present traffic volume summary information. Because the user determines the value of each presentation, the reports have been redesigned based on user requests and feedback. The people at VDOT Mobility Management's Traffic Monitoring Section who produce these books welcome requests for other helpful ways of presenting the summary information.

A compact disc (CD) is available that includes files in the Adobe® Portable Document Format (PDF) that can be displayed, searched, and printed using common desktop computer equipment. The CD includes the publications described above as well as a number of other reports, including specialized VMT summaries and smaller AADT reports for each city and town separately.

Publication Notes

Parallel Roads

For road inventory and management purposes, some roadways are counted separately by direction and have separately published traffic estimates for each direction of travel. Examples of such roadways are the interstate system and routes with separated facilities and (usually) one-way traffic facilities in urban areas. In these publications, they are referred to as parallel roads. As a convenience for the users of the publication, the listing for segments of roads with parallel segments are published with both the traffic estimates for their own direction of travel (e.g. I-95 Northbound) as well as the estimate of the total of all traffic on the same route including parallel roadways (all directions of I-95). The publication will have a “Combined Traffic Estimates for Parallel Roadways on this Route” or “Combined Traffic” identifiers for the combined direction of travel estimates.

Roadways such as I-395 with a North segment, a South segment and a separate Reversible lane segment will have the estimate for more than two parallel roadways included in the entire combined traffic estimate.

Some routes have very complicated paths through cities and towns. These parallel paths may be too complex to allow a relationship between nearby sections of the opposite direction on the same route. In this case, to indicate that the traffic estimates for such a road segment may not include all directions of traffic on that route, the line that would list the combined values will indicate “NA” for not available.

VDOT’s traffic monitoring program includes more than 100,000 segments of roads and highways ranging from several mile sections of Interstate highways to very short sections of city streets. Due to problems experienced obtaining some traffic count data, and the level of quality necessary to maintain confidence in the data, no estimate is currently available for some segments of roadway. These segments are included in the publications indicating “NA” for not available. It is the intention of the VDOT’s Mobility Management Traffic Monitoring group to obtain the data necessary and to report traffic volume estimates on all road segments included in these publications.

Many of the road segments in this program are local secondary roads. The amount and detail of data collected on these roads are not as great as the data collected on higher volume roads. The vehicle classification, average weekday traffic volumes, and the theoretical design hour traffic volumes are not calculated for these roads. The publications indicate “NA” for the information that is not available.

This publication is based on a traffic monitoring program initiated in 1997. Because the data collection techniques and statistical evaluation processes are different than those used in previous years, comparison with previous publications may be misleading.

Glossary of Terms:

Route: The Route Number assigned to this segment of roadway with the master inventory route number if this is an overlapping route, with official street or highway name if available.

Length: Length of the traffic segment in miles.

AADT: Annual Average Daily Traffic. The estimate of typical daily traffic on a road segment for all days of the week, Sunday through Saturday, over the period of one year.

QA: Quality of AADT:

- A Average of Complete Continuous Count Data
- B Average of Selected Continuous Count Data
- F Factored Short Term Traffic Count Data
- G Factored Short Term Traffic Count Data with Growth Element
- H Historical Estimate
- M Manual Uncounted Estimate
- N AADT of Similar Neighboring Traffic Link
- O Provided By External Source
- R Raw Traffic Count, Unfactored

4Tire: Percentage of the traffic volume made up of motorcycles, passenger cars, vans and pickup trucks.

Bus: Percentage of the traffic volume made up of busses.

2Axle Truck: Percentage of the traffic volume made up of 2 axle single unit trucks (not including pickups and vans).

3+Axle Truck: Percentage of the traffic volume made up of single unit trucks with three or more axles.

1Trail Truck: Percentage of the traffic volume made up of units with a single trailer.

2Trail Truck: Percentage of the traffic volume made up of units with more than one trailer.

QC: Quality of Classification Data:

- A Average of Complete Continuous Count Data
- B Average of Selected Continuous Count Data
- C Short Term Classified Traffic Count Data
- F Factored Short Term Traffic Count Data
- H Historical Estimate
- M Mass Collective Average
- N Classification Estimates of Similar Neighboring Traffic Link

K Factor: The estimate of the portion of the traffic volume traveling during the peak hour or design hour.

QK: Quality of the Peak Hour estimate:

- A Factor based on 30th Highest Hour Observed During at least 250 days of Continuous Traffic Data
- B Factor based on other Hour Observed During Less than 250 days of Continuous Traffic Data
- F Factor based on Highest Hour Collected at in a 48 Hour Weekday Period
- M Factor based on Manual Estimate of design hour
- N Peak Hour Factor of Similar Neighboring Traffic Link
- O Provided by External Source

Dir Factor: The estimate of the portion of the traffic volume traveling in the peak direction during the peak hour..

AAWDT: Average Annual Weekday Traffic. The estimate of typical traffic over the period of one year for the days between Monday through Thursday inclusive.





QW: Quality of AAWDT:

- A Average of Complete Continuous Count Data
- B Average of Selected Continuous Count Data
- F Factored Short Term Traffic Count Data
- G Factored Short Term Traffic Count Data with Growth Element
- M Manual Uncounted Estimate
- N AAWDT of Similar Neighboring Traffic Link
- O Provided by External Source





Year: Year for which the published values are appropriate. If the Quality of AADT (QA) is "R", the year is the year that the raw traffic count was collected, and if available,

Route Shield Legend

Route Systems

North 	Interstate Route	Traffic volume data for Interstate Routes and some other routes are reported separately by direction, as well as combined.
	US Route	
	Virginia State Route	
	Secondary Route	

Special Routes

Bus 	Bus - Business Route
	Bypas - Bypass Route
	Truck - Truck Route
ALT 	ALT - Alternate Route
	Wve - Wye Route connector
	P - Parallel Route; Southbound or Westbound direction lanes of a numbered route where they are on a different road facility than the other direction.
	The VDOT Maintenance Jurisdiction number is displayed below the Secondary Route Number if the Maintenance Jurisdiction is different than the jurisdiction in the title of the report.

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Route		Length	AADT	QA	4Tire	Bus	-----Truck-----				QC	K Factor	QK	Dir Factor	AAWDT	QW	Year
							2Axle	3+Axle	1Trail	2Trail							
Town of Front Royal																	
55	Strasburg Rd	0.90	8300	G	From:	WCL Front Royal					C	0.095	F	0.615	9000	G	2003
					To:	US 340; 522											
55	522 Shenandoah Ave	0.34	26000	G	From:	CL Front Royal					F	0.083	F	0.505	27000	G	2003
					To:	14 ST											
55	522 14th Street	0.24	22000	G	From:	Shenandoah Ave					F	0.080	F	0.526	22000	G	2003
					To:	North Royal Ave											
55	522 North Royal Ave	0.35	24000	G	From:	14TH ST					C	0.080	F	0.527	24000	G	2003
					To:	US 522,SR 340											
55	340 North Royal Ave	0.25	13000	G	From:	RT 522 & RT 340					F	0.078	F	0.542	14000	G	2003
					To:	6th St											
55	340 North Royal Ave	0.57	16000	G	From:	6th St					C	0.075	F	0.505	17000	G	2003
					To:	E Main St											
55	340 South Royal Ave	0.40	15000	G	From:	E Main St					C	0.077	F	0.514	16000	G	2003
					To:	US 340											
55	South St	0.54	13000	G	From:	US 340					C	0.083	F	0.572	14000	G	2003
					To:	US 522											
55	John Marshall Hwy	1.72	12000	G	From:	US 522					C	0.095	F	0.667	13000	G	2003
					To:	ECL Front Royal											
340	South Royal Ave	0.31	14000	G	From:	SCL Front Royal					F	0.077	F	0.63	15000	G	2003
					To:	SR 55 South St											
340	South Royal Ave	0.40	15000	G	From:	SR 55 South St					C	0.077	F	0.514	16000	G	2003
					To:	E Main St											
340	North Royal Ave	0.57	16000	G	From:	E Main St					C	0.075	F	0.505	17000	G	2003
					To:	6th St											
340	North Royal Ave	0.25	13000	G	From:	6th St					F	0.078	F	0.542	14000	G	2003
					To:	US 522, 8th St											
340	522 North Royal Ave	0.35	24000	G	From:	US 522, 8th St					C	0.080	F	0.527	24000	G	2003
					To:	14th St											
340	522 14th Street	0.24	22000	G	From:	North Royal Ave					F	0.080	F	0.526	22000	G	2003
					To:	Shenandoah Ave											
340	522 Shenandoah Ave	0.34	26000	G	From:	14th St					F	0.083	F	0.505	27000	G	2003
					To:	CL Front Royal											
522	Chester Gap Rd	0.60	8600	G	From:	SCL Front Royal					C	NA		8600	G	2003	
					To:	Criser Rd											
522	Chester Gap Rd	0.35	11000	G	From:	Criser Rd					F	0.094	F	0.627	11000	G	2003
					To:	SR 55 South St											
522	Commerce Ave	0.47	23000	G	From:	SR 55 South St					C	0.089	F	0.517	23000	G	2003
					To:	Main St											
522	Commerce Ave	0.74	16000	G	From:	Main St					C	0.086	F	0.516	17000	G	2003
					To:	Happy Creek Rd											
522	Commerce Ave	0.35	14000	G	From:	Happy Creek Rd					F	0.084	F	0.505	14000	G	2003
					To:	US 340 North Royal Ave											
522	North Royal Ave	0.35	24000	G	From:	Commerce Ave					C	0.080	F	0.527	24000	G	2003
					To:	14th St											
522	14th Street	0.24	22000	G	From:	North Royal Ave					F	0.080	F	0.526	22000	G	2003
					To:	Shenandoah Ave											

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Route		Length	AADT	QA	4Tire	Bus	-----Truck-----				QC	K Factor	QK	Dir Factor	AAWDT	QW	Year
							2Axle	3+Axle	1Trail	2Trail							
Town of Front Royal																	
522	Shenandoah Ave	0.34	26000	G	From:	14th St					F	0.083	F	0.505	27000	G	2003
					96%	0%	1%	1%	1%	0%							
					To:	NCL Front Royal											
2	Criser Rd	0.51	2100	G	From:	Luray Ave					C	0.089	F	0.525	2300	G	2003
					99%	0%	1%	0%	0%	0%							
					To:	South Royal Ave											
2	Criser Rd	0.71	3800	G	From:	99%					F	0.103	F	0.698	4100	G	2003
					0%	1%	0%	0%	0%								
					To:	Chester Gap Rd											
4001	Luray Ave	0.45	890	G	From:	WCL Front Royal					F	0.101	F	0.605	960	G	2003
					98%	0%	1%	0%	1%	0%							
					To:	Stonewall Dr											
4001	Luray Ave	0.21	1400	G	From:	98%					C	0.100	F	0.571	1500	G	2003
					0%	1%	0%	1%	0%								
					To:	W Main St											
4002	Stonewall Dr	0.25	490	G	From:	Luray Ave					F	0.099	F	0.685	530	G	2003
					99%	0%	1%	0%	0%	0%							
					To:	US 340 South Royal Ave											
4002	Stonewall Dr	0.42	2800	G	From:	US 522 Commerce Ave					C	0.095	F	0.647	3000	G	2003
					99%	0%	1%	0%	0%	0%							
					To:	Charles St											
4004	West Main St	0.64	1500	G	From:	Kerfoot Ave					C	0.094	F	0.616	1600	G	2003
					98%	0%	0%	1%	1%	0%							
					To:	Luray Ave											
4004	West Main St	0.07	2500	G	From:	97%					F	0.088	F	0.661	2700	G	2003
					1%	1%	0%	1%	0%								
					To:	North Royal Ave											
4004	East Main St	0.25	3500	G	From:	97%					C	0.088	F	0.514	3700	G	2003
					1%	1%	0%	1%	0%								
					To:	Blue Ridge Ave											
4004	East Main St	0.13	3000	G	From:	97%					F	0.089	F	0.541	3300	G	2003
					1%	1%	0%	1%	0%								
					To:	Commerce Ave											
4005	Happy CreekK Rd	0.85	2400	G	From:	Commerce Ave					C	0.098	F	0.563	2600	G	2003
					99%	0%	0%	0%	0%	0%							
					To:	6Th St											
4006	Kendrick Lane	0.19	7900	G	From:	Shenandoah Ave					C	0.088	F	0.511	8500	G	2003
					99%	0%	1%	0%	0%	0%							
					To:	6Th St											
4006	6th Street	0.11	7300	G	From:	Kendrick Ln					F	0.083	F	0.501	7900	G	2003
					97%	0%	1%	1%	1%	0%							
					To:	US 340 North Royal Ave											
4006	6th Street	0.14	5500	G	From:	97%					F	0.085	F	0.507	5900	G	2003
					0%	1%	1%	1%	0%								
					To:	Commerce Ave											
4006	6th Street	0.62	6300	G	From:	97%					C	0.092	F	0.516	6800	G	2003
					0%	1%	1%	1%	0%								
					To:	Happy Creek Rd											
4006	Happy Creek Rd	2.19	4900	G	From:	6Th St					C	0.097	F	0.561	5300	G	2003
					95%	0%	1%	1%	2%	1%							
					To:	ECL Front Royal											
4010	Shenandoah Ave	0.50	6100	G	From:	Kendrick Lane					C	0.087	F	0.519	6600	G	2003
					97%	0%	1%	0%	2%	0%							
					To:	14Th St											
11th Street		860	G	From:	Virginia Ave						0.094	F		860	G	2003	
				To:	North Royal Ave												
				13th Street		540	G	From:	Jefferson Avenue								
To:	Monroe Avenue																
Jamestown Road		1300	G					From:	Accomac Road						0.089	F	
				To:	Charles Street												

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						2Axle	3+Axle	1Trail	2Trail							
Town of Front Royal																
Kendrick Lane		3300	G	From	Massanutten Avenue					0.090	F	0.563	3300	G	2003	
				To	Shenandoah Avenue											
Washington Avenue		330	G	From	Happy Creek Road					0.12	F	0.563	330	G	2003	
				To	6th Street											